**Biohacker 101**Thursday’s starting April. 28th at 5PM PT at <http://youtube.com/TheODINInc/live/>

Last Class is Thursday June 22nd

**Instructor(s)**

Josiah Zayner ([case@the-odin.com](mailto:case@the-odin.com))

Esther Kim ([esther@the-odin.com](mailto:esther@the-odin.com))

Guest Speakers

***Course Description***

*This course will go from cells to DNA to protein. It will give students a basic understanding of how to genetically edit cells and what that means. The course also provides an extensive hands-on component so that students by the end should be able to genetically modify cells on their own and understand physically what that constitutes.*

***Course Goals***

Students who complete this course successfully will be able to:

* Use laboratory equipment like scales and pipettes
* Understand sterile technique and antibiotic usage
* Culture bacteria
* Genetically modify bacteria
* Use CRISPR and design their own CRISPR experiments

***Required Texts, Materials, or Equipment***

* Molecular Biology of the Cell Book <https://drive.google.com/open?id=1rCcsybOZGc0pok5-HRHvXlZAVYkdk-Xs>
* Snapgene Viewer [http://www.snapgene.com/products/snapgene\_viewer](http://www.snapgene.com/products/snapgene_viewer/)/
* VMD <https://www.ks.uiuc.edu/Research/vmd/>
* All physical materials are included in price of class

***Weekly Work/Homework***

Each week there will be assigned readings and experiments to perform. They should take no more than a few hours investment each week.

***Course-Specific Support or Supplementary Instruction***  
The internet has a wealth of information on the topics presented in class. If you don’t understand something search it out. If you still don’t understand it then ask.

When trying to access papers behind paywalls use <http://sci-hub.tw> for free access to most any paper

***Preliminary Schedule of Topics, Readings, and Assignments***

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| **Start Date** | **Topics/Assigned Readings/Homework** | **Finish By** |
| **April 28** | MBotC Chapter 1  MBotC Chapter 2\*Optional Reading | **May 11** |
| **May 12** | MBotC Chapter 3 | **May 25** |
| **May 26** | MBotC Chapter 6  MBotC Chapter 7\*Optional Reading | **June 8** |
| **June 9** | CRISPR Readings will be assigned | **June 22** |